

**STUDY OF CAREER AND TECHNICAL EDUCATION
ADVISORY GROUP MEETING**
Issues from Roundtables

Central Virginia Roundtable – Hanover Center for Trades and Technology

- Virginia has a strong CTE program. CTE provides pathways for young people to be life long learners.
- There is a need for a well-trained workforce, particularly true in Hanover. This drove the creation of the Hanover Center for Trades and Technology.
- Currently, there is much emphasis on college and liberal arts which may generate “paper-pushers”. Not as much emphasis for trades, manufacturing or other CTE pathways. These jobs are actually more secure and generate strong earnings and a strong workforce.
- Localities may be focusing more on demand and not as much on supply. For example, many students may want to pursue Forensic Science (e.g. CSI) but maybe there will only be ten jobs per year in this field.
- Another example is Qimonda, which was a major driver of the workforce in Central Virginia, but now that it is out of business, there is a serious need for workforce retraining.
- Workforce Investment Act, local Workforce Investment Boards, these entities deal with issues of workforce training. However, there may be overlap with other agencies. Look at funding and coordination with other agencies.
- Another issue is that manufacturing jobs are available but manufacturing is a hard sell for students. Assembly line perception but this is not accurate. Manufacturing concrete pipe is now an automated process. There is a need to show this to students; particularly while they are young.
- Engineering must not be overlooked. The biggest challenge is finding and training engineers. Significant need for engineers.
- CTE certifications need to be aligned with actual employers’ needs. Some certifications received through CTE may not be what employees need and school divisions are covering the cost of students receiving industry credentials, which may not match what employers want.
- Students need to have “workplace readiness skills”, these are skills that are crucial such as punctuality, work ethic, how to count out change, etc.
- Hard to find qualified and reliable workforce. Once employers conduct a credit check, a criminal background check and a drug screen, 80 percent of all applicants can be eliminated.
- Work ethic is also an issue for employers. For example, gutter installers can potentially earn \$70,000 per year but employees do not want to work 40 hour weeks, may not be dependable and do not always show up for jobs. Employers cannot maintain and grow their business unless they have a skills and reliable workforce.

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- Customer service is also not emphasized. Very difficult to obtain employees with adequate customer service skills. Difficult skill to master.
- It is important to remember that schools can teach skills, employers can teach the basics but it is not all up to the schools. Parents have a role.
- Some industries are suffering from an aging workforce and are having difficulty attracting new talent because the perception is that these jobs (e.g., HVAC mechanic) are not “sexy”.
- Outreach to students and parents on CTE may be too late to attract them to CTE. Students may not find out about CTE until 9th or 10th grade. They may have other electives they want to pursue instead of CTE.
- Add to the “wish list” – more time built into the day and into the curriculum for CTE.
- Academic and Career Plans (ACP) may help with earlier planning and the provision of CTE to students at an earlier age.
- Financial Literacy Classes are important but negatively impact CTE because school administrators may use class time that could be used for CTE to fulfill these requirements. Must compete with another elective.
- There is a need for advocacy/PR describing the benefits of CTE. Schools, counselors and parents have no clue on the benefits of CTE and how their children can access it.
- Need to identify those occupations with shortages of qualified workers and incorporate into CTE (e.g., large animal veterinarians).

Northern Virginia Roundtable – Chantilly Academy

- Industry certifications are costly. Local decision in what is covered. In Fairfax, it is very expensive to cover the costs of certification including pre-tests, practice tests. In Fairfax 3,700 earn an industry certification. ACAC certifications cost \$125.
- It is difficult to find qualified teachers certified to teach in CTE programs. For example, a teacher may be certified in science and have a teaching certificate but cannot be a CTE teacher.
- It is important not to forget the vocational component in CTE in lieu of academic rigor. There is a need for both elements. Plumbers and carpenters play a major role in the workplace.
- Programs must generate enough interest to get students to participate to justify the creation of a program/lab.
- There is a huge stigma surrounding CTE. Parents push for college. CTE = blue collar.

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- Issues surrounding dual enrollment. Dual enrollment a very good option for students and a viable pathway to a good job. However, there are no statewide guidelines for the administration of dual enrollment in CTE. It would be helpful to have portability of credentials and transparency of pathways. There are unequal processes for dual enrollment across the Commonwealth. If this was rectified, more students in Virginia could graduate with a CTE certificate and college credits. Systemic issue because not the same across the Commonwealth.
- Issue with teacher credentials pertaining to dual enrollment. Teachers must have Master's degree and 18 credit hours in the course. Very difficult. Possibly utilize online classes through the local community college when there is a shortage of qualified teachers.
- Economic incentives from business partners help provide training and jobs to students. Employers not always welcomed into the schools.
- Parents and counselors unaware that a majority of future jobs will not require a 4-year degree.
- Need for more industry related training in CTE.
- Career planning must start sooner in a student's educational career. Also, have students made aware of professions with growth and high demand. An example of this is that health allied professions there are huge demands. Not just nurses but X-Ray Technicians and other health technicians, radiologists. Very strong job stability.
- Geographic Information System (GIS) Technicians is another high demand occupation. GIS is part of Northern Virginia Community College. Very strong programs in Northern Virginia. First tier of GIS technician requires only 8 credits and a student can pursue this while in high school.
- Centers of excellence in PA, regional training facilities are a good model.
- Can be difficult to create certain programs for Associate's and/or Bachelor's programs, e.g., construction management or plumbing. Varies by school division and among community colleges.
- Relevance of traditional high school program for senior year. Need a "Capstone" class for seniors to make learning real and incorporate local businesses.
- Growing need for entrepreneurial partnerships between schools and businesses. Curriculums must be adapted to be strategically aligned with workforce demands. Businesses would like to partner to help provide the labs/space for CTE programs if it accommodates a need for them.
- Investigate Workforce Investment Boards and how these Boards work with school divisions, not just the community college system.

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Tidewater Roundtable – Virginia Beach Advanced Technology Center

- Workforce Readiness Skills (WRS) 13 skills, address attendance, teamwork, computer literacy, etc. The WRS covers the “soft” skills that youth do not always get at home or in the basic school curriculum.
- Merger of career education with Virginia Wizard. Potential to take CTE in Virginia to the next level.
- CTE curriculum resource center budget being cut. Significant cuts in Governor’s reduction plan. Impact upon CTE.
- Not many parents or business folks aware of DOE’s 16 pathways and 79 career clusters. Very good information but not available to parents or to the general public.
- Leadership an issue. Superintendents call the shots, must have people ready to infuse new knowledge and keep learning of new skills continuous. Superintendents do not always buy into CTE. Only effective program if there is buy-in from the Superintendent.
- Education split between theory and application. The two need to be brought together.
- If all careers are accounted for in the pathways, but Engineering and Accounting included in CTE. CTE/regular curriculum with other pathways is not integrated. Separate tracks – diplomas v. CTE.
- Key to successful CTE, better partnerships, innovative ideas and collaboration between school system and business. Examples are Sentara and Virginia Beach schools create simulation labs for health professions.
- High schools have 24-credits for students to earn diploma, less and less elective opportunities. Pushing some credits down to middle school.
- Failure rate of students in science and math programs in college is 35 to 50 percent. Need to better prepare high school students for these requirements. CTE can help with this.
- Relevance in certifications a big issue. Technological advancements takes place at least every 12-months, new skills are introduced 12-months. DOE only reviews certifications every 12 months. Need to have rolling review of certifications, not just once every year.
- Evaluate using virtual tools v. real laboratory. Look at cost savings.
- Better prepare students for what they need to pursue their goals. If they want careers in healthcare, emphasize math or science classes and not PE classes for electives.
- Guidance Counselors do not have time to “counsel” students on requirements for classes or for other needs.

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- Need a paradigm shift in education. Need more show and tell and more business involvement.
- The #1 industry in Virginia is agriculture. Is this addressed in CTE?
- Workplace Readiness Skills (WRS) cannot be applied because there is no comparable test to use as a benchmark. However, these skills are what employers want. Virginia Beach uses WRS because businesses want this. Cost of testing is not included in the SOL testing budget in the Appropriations Act.

Shenandoah Roundtable – Massanutten Technical Center

- New programs are created based on the stated need of the community. Desire in Harrisonburg/Rockingham to keep students with desire to pursue certain careers in the community (e.g. firefighters and rescue workers).
- Issues with instructors in high school who are not eligible to teach dual enrollment classes because of the requirement that they have a Master's plus 18 credits in the specialty. Cannot justify teachers to return for Master's because the pay is the same. Certain majors do not really require a Master's degree but these teachers still cannot teach these dual enrollment classes. Difficult to find qualified teachers.
- Personal finance and economics class will be a barrier to CTE. It will take children out of CTE classes. Must be implemented but with no new staff or money. CTE will be eliminated in some schools. Other courses, like Geography, will also be eliminated to allow for this new course.
- State requirement to test 60 percent of all CTE completers and next year must test 100 percent of all CTE completers. No funding to accomplish this mandate. Frederick County spent \$38,000 for testing requirements last year but only \$14,000 in the testing budget.
- There are 30 industry credentials, 10 of these have different rules and all of these tests are not designed for youth, designed for adults.
- Different industries tests have completely different testing rules regarding use of proctors. This is another issue for industry credentials and testing for these credentials.
- Disconnect between industry credentials v. what industry wants. Industry and employees not always consulted. Some tests are obvious, particularly if a state license is issued. However, this is not always the case, e.g., welding.
- Every community college handles dual enrollment differently. Dual enrollment may count in the community college system but frequently, these classes cannot be transferred to a 4-year university.
- Tech prep consortium, based in the local community college, is a very strong partner for CTE.

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- Battle for resources with higher education. If 76 percent of all future jobs are not going to require a 4 year degree, assess shifting funding to local high schools, tech prep and community colleges. Evaluate using DOE building funds to fund CTE centers. Regional centers have strong CTE programs and can offer more than division because partnerships with several school divisions. Very cost effective. Currently, there are nine regional centers. They offer current programs for high-demand careers. Beneficial to communities.
- Career coaches make a tremendous difference. Trained to help students achieve future employment goals. There is a need to have career coaches for every high school but not enough funding for this.
- Classroom management needs to be included in teacher training programs. This could help retain teachers because they would have additional skills with effectively managing their classrooms.
- Funding and additional mandates a huge issue in CTE. New career and technical diplomas which require additional funding. Academic and career plans also require funding. Requirements keep increasing but no accompanying funding. This causes frustration among educators and administrators.
- Guidance counselors/schools get assessed on how many students attend a 4-year institution.
- CTE is expensive because schools cannot place 30 students in an Auto shop class unlike a Psychology course; there typically is a 20 student maximum.
- Certain credentials are powerful, such as A+ and Microsoft certification but others are not necessary. Workplace Readiness Skills are at the top of the list of what employers want.
- Virginia expanding Workplace Readiness Skills from 13 to 21. Redefining the skills and including a standalone test for assessing the Workplace Readiness Skills.
- Teacher praxis test not reflect teacher class work and irrelevant if you go to another state to teach because of reciprocity.
- "Pile ons" a problem in CTE. School divisions cannot continue to do more with less. Schools looking at all programs, summer school, gifted programs because they cannot spend what they do not have. Reiterate Academic and Career Plans and Finance and Economics requirements are problematic for schools.